

Date: Mon, 2 May 94 07:09:22 PDT
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: Bulk
Subject: Info-Hams Digest V94 #479
To: Info-Hams

Info-Hams Digest Mon, 2 May 94 Volume 94 : Issue 479

Today's Topics:

ANARTS RTTY NEWS BULLETIN 807 01/05/94.
ARLD025 DX news
ARRL address
Daily Summary of Solar Geophysical Activity for 01 May
Daily Summary of Solar Geophysical Activity for 28 April
inclusion
Straight Key Events ? [Q]

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 2 May 1994 18:16:00 +1000
From: ihnp4.ucsd.edu!usc!howland.reston.ans.net!pipex!sunic!trane.uninett.no!
nac.no!ifi.uio.no!wabbit.cc.uow.edu.au!news.ci.com.au!eram.esi.com.au!not-for-
mail@network.ucsd.edu
Subject: ANARTS RTTY NEWS BULLETIN 807 01/05/94.
To: info-hams@ucsd.edu

[ANARTS - Australian National Amateur Radio Teletype Society]

ANARTS NEWS BULLETIN 807 01/05/94.

SUNDAY Transmission Schedule.

3.545 MHz	0930 UTC	VK2BQS (Jim)
7.045 MHz -3	0030 UTC	VK2DPM (Alan)
14.070 MHz (amtorg/fec)	0030 UTC	Not this week.
14.091 MHz	0030 UTC	VK2BQS (JIM)

146.675 MHz	0030/0930 UTC	VK2JPA (PAT)
144.850 MHz (ax25 bbs)		VK2JPA AT VK2RWI
146.675 MHz (rtty mmbbs/repeater)		VK2RTY

Views expressed in this news bulletin are not necessarily those of the Broadcast Officer, the Relay Officers, or of the Society.

GTOR (cont.)

Background Research

It occurred to us after porting Pactor into the KAM that this protocol did not go far enough. It did not incorporate any of the potential strengths prescribed by MIL-STD-188-141A. In addition, we knew that commercial and military systems use forward error correction (FEC) and data interleaving. So, we decided to evaluate the potential of using FEC coding with interleaving to increase data file transfer throughput with existing multi-mode TNCs such as the KAM and KAM-Plus.

We collected signatures of HF error patterns by sending Pactor idle characters through a DSP-based HF simulator. The simulator was programmed for various types of channels and conditions. In particular, we gathered error signatures by using the good, moderate, poor, and flutter fading channels prescribed by the CCIR (5) as recommended simulator test channels.

We then exclusive-ORed the error patterns with random data files on a PC and tested various coding schemes. Random data files were Golay encoded, interleaved, and then mutilated by the error signature. The process was then reversed; each file was de-interleaved, decoded and the data displayed. We were encouraged with the results so we moved on to the remaining major design tasks: designing a robust hybrid-ARQ protocol and determining whether or not the TNC could handle the necessary computing task!

A protocol evolved over time that met the challenge. We coded and ported it into the KAM Plus and conducted real-time tests using the HF simulator. Minor adjustments were made and we began on-the-air tests. G-TOR performed even better than our simulator predicted. Through a combination of coding and interleaving, G-TOR 'hung in there' even when interference appeared and signals were weak but readable.

G-TOR Frame Structure and Hybrid-ARQ Cycle

G-TOR operates as a synchronous hybrid-ARQ, see figure 1. Regardless of transmission rate, the cycle duration is always 2.4 seconds, data frames are 1.92 seconds long, and the acknowledgements take 0.16 seconds. At 300 baud, each data frame contains 69 bytes of data, one control byte, and a two byte CRC. Frame makeup is noted in figure 2.

figure 1. G-TOR frame timing

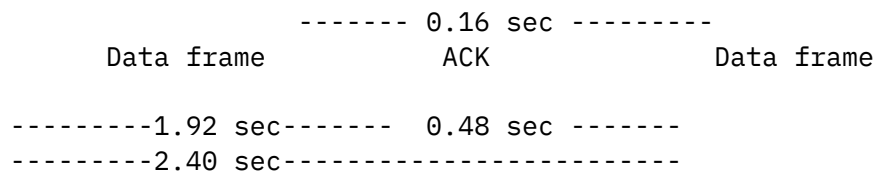


Figure 2. G-TOR frame structure before interleaving

Data	status (1 byte)	CRC (2 bytes)
69 data bytes at 300 baud	- -	
45 data bytes at 200 baud	- -	
21 data bytes at 100 baud	- -	
	- -	
	7 6 5 4 3 2 1 0	

To establish a link, the master station transmits the callsign of the intended receiver and the information receiving station (IRS) synchronizes to it. Once in step, it acknowledges such to the master and sends <link established> to its terminal. Transmission of data may then begin. Sufficient time is left between the end of the data frame and the start of the acknowledgement for propagation between stations over an HF path. The IRS changes its acknowledgement frame into a full-length data frame to effect a change in direction in information. Once the other station acknowledges this action, changeover is complete. Link quality, dictated by the number of consecutive good or bad frames received, determines link speed.

The effective performance of stations, while communicating over adverse HF channels, relies on the combined use of forward error correction, interleaving, and redundancy. These tools for improvement are incorporated in G-TOR within the firmware of the KAM-Plus (or KAM with enhancement board). We adopted an extended version of the (24,12) Golay code for G-

TOR. the generator polynomial is

$$g(x) = x^{11} + x^9 + x^7 + x^6 + x^5 + 1$$

Procedures for data formation, transmission, reception, and data recovery are outlined below. Prior to transmission, 300 baud frames are divided into 48 12-bit words and matched with 48 error correction words of 12 bits each. The entire 72 byte data frame is then interleaved bit by bit, resulting in 12 bins of 48 bits, and transmitted. Upon reception by the IRS, the reverse process is carried out. The frame is synchronized, de-interleaved, decoded, and checked for proper CRC. If the frame is found to be in error, the IRS will request that the matching parity frame be sent. Upon receipt, the parity frame is used in combination with the data frame in an attempt of recover the original data bits. If unsuccessful, the ARQ cycle begins again. The dispersement of noise-burst errors via interleaving and the power of the Golay code to correct 3 bits in every 24 usually results in the recovery of error-free frames.

more next week

Editor's note : there is a critique of GTOR on the packet system at the moment. In the interests of amateurs who do not have access to packet, we will run this item following the completion of this review so as to have another viewpoint on this new system.

IPS weekly report

22 April - 28 April 1994

Issue No 17

Date of issue: 29 April 1994

INDICES:

Date	22	23	24	25	26	27	28
10cm	085	085	083	083	081	078	077
A	06	10	08	08	06	06	(05 estimated)
T	50	39	47	47	45	42	49

SUMMARY OF ACTIVITY

Solar activity was low on 22nd, and very low 23rd-28th April.

The geomagnetic field at Learmonth (WA) was quiet on 27th-28th April, and quiet to unsettled for the remainder of the period except for one active period on 23rd.

Ionospheric F2 critical frequencies at Sydney were near predicted monthly values throughout the period.

FORECAST FOR THE NEXT WEEK (29 - 5 May)

SOLAR: Very low to low.

GEOMAGNETIC: Unsettled to active on 29 April, active to minor storm levels thereafter.

IONOSPHERIC Near normal to 15 per cent below predicted monthly values.

Courtesy of IPS Radio and Space Services

VK2SG RTTY DX NOTES 22 APR 94

VK2SG RTTY DX NOTES FOR WEEKENDING 22 APRIL 1994 (BID RTDX0422)

Notes appear a little short this week, but with conditions as they have been and actually are, reports have been few. There has been very little activity, or maybe everyone was chasing on the bands to find some signal around. There is a good news for those looking for 9X5LJ. Jacques and his wife Monique are now in Belgium all safely.

Our thanks this week go to: ZS5S, W2JGR, WB2CJL, VK2SG, ON6R0, I5ICY, I5IGQ and IK5PWJ PacketCluster and the NJ0M node of the Twin Cities.

BANDPASS:

FRIDAY 15

1617-14091 9K2ZZ

1938-14084 CX3ABE

SATURDAY 16

1438-14086 LZ1KBB

1440-14088 A45XC

1440-14084 UT5DX
1536-21092 ZP6DN
1600-21070 S92ZM ARQ
1610-14084 S57U
1628-21070 S92ZM Pactor
1854-14084 ER1PE

SUNDAY 17
1329-14083 SV5AZP
(bad conditions)

MONDAY 18
0808-14088 OD5PL
0809-14090 UY0IO
1440-14089 LY2BBF
1506-21089 UN5GY
1633-14088 9H1ET
1655-14089 4L1BR
1720-14091 UN7LFO
2002-14087 HI8ROX
2317-14082 S92ZM
2331-14085 9A3TB

TUESDAY 19
0514-14066 VU2RAK ARQ
1709-14089 YY2KBB
1948-14084 CX7BF
2031-14092 FG5FI

WEDNESDAY 20
0750-14085 UX0KA
0736-14083 9H1ET
1154-14087 OH0NLP
1155-14085 ER2BP
1355-14087 YT70X
1732-14089 UT5DX
2055-7037 OH0NLP

THURSDAY 21
0812-04087 OH0NLP
1149-14085 UT5DX
1158-14083 RA2FB
1304-14083 GI4NIV

NOTES OF INTEREST:

DXAC VOTE RESULTS. The DXAC passed a recommendation to delete Walvis Bay (ZS9) and Penguin Islands (ZS0,1). Both countries became deleted effective date of March 1, 1994.

RTTY (FS RTTY). We mourn the loss of Harvey McCoy, W2IYX who became a silent key on 17 April 1994. Harvey was the "father" of frequency shift RTTY (FS RTTY), having invented it for the U.S. military during World War II. All RTTYers owe him a debt of gratitude.

To those going to Dayton next week I wish a nice trip and lot of fun in the meeting and during the RTTY Dinner.

GL de (DX2) Luciano, I5FLN AT ZS5S.ZAF.AF

Coming events

1994

May	14th-15th	Volta RTTY WW Contest
-----	-----------	-----------------------

Society information

The Society may be contacted at : PO Box 860, Crows Nest 2065 Australia, for such matters as membership and general enquiries. Enquiries can also be made by packet to the President (Col) VK2CTD, or the Secretary (Pat) VK2JPA @ VK2RWI or whatever is the current substitute BBS.

News items may be sent to Broadcast Officer PO Box 60 Blacktown 2148 Australia, or by packet to VK2JPA as above.

Email address for the Broadcast Officer is :

patl@conmusic.pitt.su.oz.au

The Society welcomes news items on any digital subjects from anywhere in the broadcast footprint. We know we reach ZL and many South Pacific islands. We are looking forward to news from your areas to let other amateurs know what you are doing in the hobby. Hope to hear from you.

73s de Pat VK2JPA Broadcast Officer
That concludes ANARTS NEWS807 01/05/94.

Inserted by VK2BQS (Jim) Vice President ANARTS.

--

Dave Horsfall (VK2KFU) VK2KFU @ VK2AAB.NSW.AUS.OC PGP 2.3
dave@esi.COM.AU ...muninari!esi.COM.AU!dave available

Date: 28 Apr 94 23:28:40 GMT
From: agate!howland.reston.ans.net!math.ohio-state.edu!cyber2.cyberstore.ca!
nntp.cs.ubc.ca!alberta!ve6mgs!usenet@ucbvax.berkeley.edu
Subject: ARLD025 DX news
To: info-hams@ucsd.edu

SB DX @ ARL \$ARLD025
ARLD025 DX news

ZCZC AE23
QST de W1AW
DX Bulletin 25 ARLD025
>From ARRL Headquarters
Newington CT April 28, 1994
To all radio amateurs

SB DX ARL ARLD025
ARLD025 DX news

The items in this weeks bulletin are courtesy of Scott, N9JCL, Bob, W5KNE, QRZ DX, the Ohio/Penn DX Bulletin, Chod, VP2ML, The DX Bulletin, the Yankee Clipper Contest Club PacketCluster network and Contest Corral from the pages of QST. Thanks.

MARION ISLAND. Christie, ZS8MI, though still active, will be leaving in about 2 weeks. Check 28354 kHz at 1100z, 18162 at 1145 and 14130 around 0600.

CAMBODIA. Laci, HA0HW, plans to be on from Phnom Phen from May 8 to 20. He will sign XU0HW and operate CW and SSB on 160 through 10 meters. Laci and Sanyi, HA7VK, who is currently signing XU7VK, hope to travel to Rong Island in the Gulf of Thailand and operate for about five days as XU9HA. QSL all three calls via Laci Szabo, PO Box 24, H-4151 Puspokladany, Hungary.

MICRONESIA. Nori, JR70EF, has scrubbed plans for 3D2, A35 and 5W due to transportation woes. He and JR7JLU will sign V63NI and V63YH respectively, from May 5 to 8. QSL via their home calls. And between June 8 and 17 AH9B, AH9C, AD1S, V73A and N5MIH will be sporting V63 calls on 160 through 10 meters on SSB, CW and RTTY. QSL all direct only via OKDXA, Box 88, Wellston OK 74881.

ANGOLA. John, G4AAL, is in Africa and hopes to obtain licenses for visits to Angola and Mozambique. Meanwhile, D2EGH has been worked on 14190 kHz at 2109z. QSL via CT1EGH.

DOMINICA. IK2GNV expects a J7 call sign to be issued him upon his arrival. He plans to be active on 160 through 10 meter SSB from May 1 through 10.

TUNISIA. Tom, IK8EVE, is now active from Jerba Island using the call sign 3V8TM. He has been worked on 7008 kHz at 2333z from New England.

MALTA. A group of Dutch operators hope to be active from Sliema June 24 to July 4. This DXpedition/Holiday will feature CW and SSB on 80 meters through 70 cm with some OSCAR 13 thrown in for good measure. Listen for PA0BEA as 9H3IE, PA3BIZ as 9H3ON, PA0PRT as 9H3IB, PA3DNW as 9H3KF, PE1KNL as 9H3QH, PA3ETB as 9H3KD, PA0JWK as 9H3QD, PA0PAN as 9H3KE. Operators PB0AES, PE1NZA and PA0TPM have yet to receive their Maltese call signs. QSL to each operators home CBA.

ETHIOPIA. OH2VZ has been signing ET3VZ. Try 21033 kHz at around 1325z. QSL via OH2VZ.

MARKET REEF. A group is planning a May 14 to 17 DXpedition, weather and transportation permitting. Hopes are for 160 through 6 meter activity, with CW, SSB and some RTTY. Listen for OJ0/AC6T, OH0MB, OJ0/OH1VR, OJ0/OH6RM and OJ0/OH2BBF. QSL to their home calls.

MOUNT ATHOS. Apollo, SV2ASP/A, was reported on 18148 kHz recently between 1400 and 1445z.

EASTERN KIRIBATI. Tada, JA1WPX, plans to sign T32WP from Kiritimati Island May 4 to 8. Though an all band effort, 30 and 17 meter CW will get special attention. QSL via JA1WPX.

CORSICA. A group of Italian operators plan an all band CW/SSB operation from May 19 to 23. They will concentrate on the lower bands and 30, 17 and 12 meters. On SSB listen for TK/I4ULA/P, TK/IK4HAL/P, TK/IK4NZD/P and TK/IK4GLV/P. CW stations will include TK/I4VJC/P, TK/IK4CIE/P and TK/IK4IDW/P. QSL via specific operator you work, either by the Bureau or CBA.

LORD HOWE ISLAND. Tony, VK9LA, long time resident of the island, can be found on 7084 kHz at 1130z with the Pacific Rim 40 DX Group. QSL via A.J. Tony Blasl, c/o Post Office, Lord Howe Island, NSW 2898 Australia.

BERMUDA. Bill, WB1BRE, must think Bermuda is for the birds. He will sign /VP9 on OSCARs 10 and 13, SSB only, between May 13 and 26. Check just before and after Mode S apogee between 145.910 and 145.930 MHz. Bill also plans to be on 20, 15, and 10 meter SSB, mostly in the lower portion of the General subbands and in the Novice portion of 10 meters. QSL via WB1BRE. Fred, K1EFI, will sign /VP9 on 80 through 10 meter CW only from May 12 to 20. QSL via K1EFI.

BARBADOS. Gerd, DL7VOG, will sign 8P9GQ from May 10 through 30 on 80 through 10 meters, mainly on CW, but with some SSB and RTTY. QSL via DL7VOG.

ON A SAD NOTE. Jerry, AA6BB, called the DXCC Desk reporting that his XYL Joannie, KA6V, became a Silent Key at 1105z April 28. Joannie was very active in DXing with the W7PHO Family Hour Net and QSL Manager for many stations, including the VP8SSI and 3Y0PI DXpeditions. RIP, Joannie.

COURSE CORRECTION. An error crept into last week's bulletin, ARLD023/DX CW23. The correct QSL manager for the upcoming CY9 operation is K0SN and not K0XN as originally reported.

NEW QSL ROUTE. Due to suspected mail pilferage, the new route for cards bound for TI9CF and TI9JJP is Office Box Acct 321 CR, 3900 NW 79th Avenue, Suite 564, Miami FL 33166. It is reported that mail addressed this way will be delivered to Costa Rica by courier service.

NNNN

/EX

Date: 2 May 1994 13:17:53 GMT
From: ihnp4.ucsd.edu!usc!sol.ctr.columbia.edu!news.kei.com!babbage.ece.uc.edu!
meaddata!robertp@network.ucsd.edu
Subject: ARRL address
To: info-hams@ucsd.edu

Really enjoyed the HAMVENTION this weekend. My 9 year old Daughter really enjoyed the SAREX 10th Anniversary Forum where she meet Astronauts Tony England, W0ORE and Steven Nagel N5RAW. She is even more interested in getting a ticket. I was interested in the ARRL address and failed to "swim" to their booth to get some more information about SAREX. I have it at home but does any body carry this imformation off the top of their heads. Would greatly appreciate it.

73's

Rob, N8WWA

--

```
-----
|Robert D. Penrod      |      Excess on occasion is      |
|Mead Data Central    |      Exhilarating                |
|P.O. Box 933         | It prevents moderation from |      robertp@meaddata.com
|Dayton, Ohio 45401   | acquiring the deadening      | ...!uunet!meaddata!robertp
|                      | effect of a habit.           |
-----
```

Date: Sun, 1 May 1994 23:00:56 MDT
From: ihnp4.ucsd.edu!usc!sol.ctr.columbia.edu!newsxfer.itd.umich.edu!
nnntp.cs.ubc.ca!alberta!ve6mgs!usenet@network.ucsd.edu
Subject: Daily Summary of Solar Geophysical Activity for 01 May
To: info-hams@ucsd.edu

/\

DAILY SUMMARY OF SOLAR GEOPHYSICAL ACTIVITY

01 MAY, 1994

/\

(Based In-Part On SESC Observational Data)

SOLAR AND GEOPHYSICAL ACTIVITY INDICES FOR 01 MAY, 1994

!!BEGIN!! (1.0) S.T.D. Solar Geophysical Data Broadcast for DAY 121, 05/01/94
10.7 FLUX=075.2 90-AVG=089 SSN=080 BKI=0233 4445 BAI=020
BGND-XRAY=A2.9 FLU1=4.0E+04 FLU10=1.2E+04 PKI=1244 5556 PAI=034
BOU-DEV=003,015,023,021,045,042,058,106 DEV-AVG=039 NT SWF=00:000
XRAY-MAX= B1.2 @ 1721UT XRAY-MIN= A2.3 @ 2341UT XRAY-AVG= A3.7
NEUTN-MAX= +003% @ 0510UT NEUTN-MIN= -002% @ 2100UT NEUTN-AVG= +0.2%
PCA-MAX= +0.2DB @ 2030UT PCA-MIN= -0.3DB @ 0335UT PCA-AVG= +0.0DB
BOUTF-MAX=55399NT @ 2342UT BOUTF-MIN=55268NT @ 1805UT BOUTF-AVG=55322NT
GOES7-MAX=P:+000NT@ 0000UT GOES7-MIN=N:+000NT@ 0000UT G7-AVG=+077,+000,+000
GOES6-MAX=P:+163NT@ 1946UT GOES6-MIN=N:-110NT@ 2303UT G6-AVG=+096,+028,-045
FLUXFCST=STD:080,080,080;SESC:080,080,080 BAI/PAI-FCST=025,015,010/040,030,025
KFCST=4445 5444 2214 4112 27DAY-AP=050,031 27DAY-KP=6675 4434 4455 4435
WARNINGS=*GSTRM;*AURMIDWRN

ALERTS=
!!END-DATA!!

NOTE: The Effective Sunspot Number for 30 APR 94 was 36.1.
The Full Kp Indices for 30 APR 94 are: 0o 1- 1- 0o 1- 0+ 1o 1o
The 3-Hr Ap Indices for 30 APR 94 are: 1 3 3 1 3 2 4 4
Greater than 2 MeV Electron Fluence for 01 MAY is: 2.5E+06

SYNOPSIS OF ACTIVITY

Solar activity was very low. There were numerous small erupting flux regions on the disk during the period: amongst these new Region 7715 (N08W29) was developing the most quickly. All of the regions on the disk appear to be stable at this time. An eruptive prominence was observed on west limb today near S32 between 1421Z and 1558Z.

Solar activity forecast: solar activity is expected to be very low to low.

The geomagnetic field was mostly quiet to active with some periods of storm conditions at high latitudes. An initially quiet field became disturbed after 0600Z: mid-latitudes have been active and high latitudes have fluctuated between active and major storm levels. The most likely source for the disturbance is a favorably positioned coronal hole.

Geophysical activity forecast: the geomagnetic field is expected to be at active to minor storm levels for the next 36 to 48 hours as the current disturbance continues. Activity is expected to decline sometime on the second day with a return to unsettled to active levels by the third day.

Event probabilities 02 may-04 may

Class M	01/01/01
Class X	01/01/01
Proton	01/01/01
PCAF	Green

Geomagnetic activity probabilities 02 may-04 may

A. Middle Latitudes	
Active	35/25/10
Minor Storm	25/10/05
Major-Severe Storm	15/05/05

B. High Latitudes
Active 30/25/10
Minor Storm 30/10/05
Major-Severe Storm 15/05/05

HF propagation conditions have become degraded for transpolar and transauroral circuits, although the severity of degradation has not been as strong as was previously anticipated. The next 24 to 48 hours should be the most unstable period.

COPIES OF JOINT USAF/NOAA SESC SOLAR GEOPHYSICAL REPORTS
=====

REGIONS WITH SUNSPOTS. LOCATIONS VALID AT 01/2400Z MAY

```

-----
NMBR LOCATION  LO  AREA  Z   LL   NN MAG TYPE
7710 S16W68  040  0000 AX  00  001 ALPHA
7711 S11W06  338  0010 BX  03  003 BETA
7712 S12E07  325  0010 BX  03  003 BETA
7713 N06E40  292  0010 BX  03  004 BETA
7714 S14E46  286  0000 BX  01  002 BETA
7715 N08W29  001  0030 CR  03  007 BETA
7704 N14W81  053                      PLAGE

```

REGIONS DUE TO RETURN 02 MAY TO 04 MAY

```

NMBR LAT   LO
7700 N03   208

```

LISTING OF SOLAR ENERGETIC EVENTS FOR 01 MAY, 1994

```

-----
BEGIN  MAX  END  RGN   LOC   XRAY  OP  245MHZ 10CM  SWEEP
NONE

```

POSSIBLE CORONAL MASS EJECTION EVENTS FOR 01 MAY, 1994

```

-----
BEGIN      MAX      END      LOCATION  TYPE  SIZE  DUR  II IV
01/ 1421      B1558      S32W90  EPL

```

INFERRED CORONAL HOLES. LOCATIONS VALID AT 01/2400Z

```

-----
ISOLATED HOLES AND POLAR EXTENSIONS
EAST  SOUTH WEST  NORTH CAR TYPE POL AREA  OBSN
NO DATA AVAILABLE FOR ANALYSIS

```

SUMMARY OF FLARE EVENTS FOR THE PREVIOUS UTC DAY

Date	Begin	Max	End	Xray	Op	Region	Locn	2695 MHz	8800 MHz	15.4 GHz
30 Apr:	0144	0147	0154	B1.2						
	1144	1149	1154	B3.8						
	1241	1245	1248	B1.9						
	1348	1352	1401	B1.4						
	1447	1453	1500	B2.6						
	1616	1623	1627	B3.3						
	1725	1730	1733	B3.2						
	1943	1948	1959	B2.1						

REGION FLARE STATISTICS FOR THE PREVIOUS UTC DAY

	C	M	X	S	1	2	3	4	Total	(%)
Uncorrelated:	0	0	0	0	0	0	0	0	008	(100.0)

Total Events: 008 optical and x-ray.

EVENTS WITH SWEEPS AND/OR OPTICAL PHENOMENA FOR THE LAST UTC DAY

Date	Begin	Max	End	Xray	Op	Region	Locn	Sweeps/Optical Observations
NO EVENTS OBSERVED.								

NOTES:

All times are in Universal Time (UT). Characters preceding begin, max, and end times are defined as: B = Before, U = Uncertain, A = After. All times associated with x-ray flares (ex. flares which produce associated x-ray bursts) refer to the begin, max, and end times of the x-rays. Flares which are not associated with x-ray signatures use the optical observations to determine the begin, max, and end times.

Acronyms used to identify sweeps and optical phenomena include:

- II = Type II Sweep Frequency Event
- III = Type III Sweep
- IV = Type IV Sweep
- V = Type V Sweep

Continuum = Continuum Radio Event
Loop = Loop Prominence System,
Spray = Limb Spray,
Surge = Bright Limb Surge,
EPL = Eruptive Prominence on the Limb.

** End of Daily Report **

Date: 29 Apr 94 07:36:25 GMT
From: agate!howland.reston.ans.net!math.ohio-state.edu!cyber2.cyberstore.ca!
nntp.cs.ubc.ca!alberta!ve6mgs!usenet@uchvax.berkeley.edu
Subject: Daily Summary of Solar Geophysical Activity for 28 April
To: info-hams@ucsd.edu

/\

DAILY SUMMARY OF SOLAR GEOPHYSICAL ACTIVITY

28 APRIL, 1994

/\

(Based In-Part On SESC Observational Data)

SOLAR AND GEOPHYSICAL ACTIVITY INDICES FOR 28 APRIL, 1994

!!BEGIN!! (1.0) S.T.D. Solar Geophysical Data Broadcast for DAY 118, 04/28/94
10.7 FLUX=077.3 90-AVG=090 SSN=035 BKI=1100 1111 BAI=002
BGND-XRAY=A4.6 FLU1=8.7E+05 FLU10=1.4E+04 PKI=1111 2111 PAI=004
BOU-DEV=008,009,004,004,008,006,009,006 DEV-AVG=006 NT SWF=00:000
XRAY-MAX= B5.6 @ 2110UT XRAY-MIN= A2.9 @ 0602UT XRAY-AVG= B1.0
NEUTN-MAX= +003% @ 2025UT NEUTN-MIN= -001% @ 2330UT NEUTN-AVG= +0.5%
PCA-MAX= +0.1DB @ 2355UT PCA-MIN= -0.3DB @ 0355UT PCA-AVG= -0.0DB
BOUTF-MAX=55342NT @ 1326UT BOUTF-MIN=55321NT @ 1838UT BOUTF-AVG=55332NT
GOES7-MAX=P:+000NT@ 0000UT GOES7-MIN=N:+000NT@ 0000UT G7-AVG=+086,+000,+000
GOES6-MAX=P:+129NT@ 1906UT GOES6-MIN=N:-061NT@ 0517UT G6-AVG=+108,+024,-030
FLUXFCST=STD:077,077,075;SESC:077,077,075 BAI/PAI-FCST=020,035,040/025,060,060
KFCST=2233 3333 4555 4445 27DAY-AP=006,034 27DAY-KP=1222 2222 3245 4555
WARNINGS=*GSTRM;*AURMIDWRN
ALERTS=**SWEEP:II=1@0146-0154UTC(2000KM/SEC)
!!END-DATA!!

NOTE: The Effective Sunspot Number for 27 APR 94 was 39.7.

The Full Kp Indices for 27 APR 94 are: 1o 1+ 2- 2- 2- 2- 1o 1+
The 3-Hr Ap Indices for 27 APR 94 are: 4 5 6 6 6 7 4 5
Greater than 2 MeV Electron Fluence for 28 APR is: 2.7E+07

SYNOPSIS OF ACTIVITY

Solar activity was very low. A Type II sweep was recorded this period with a start time of 28/0146Z. Estimated shock velocity was 2000 km/sec. Associated with this sweep was a B3/SF flare from Rgn 7704 (N14W39). No other significant activity was observed the past 24 hours as the other spotted regions, 7705 (N04W79) and 7707 (N00W63) continue their slow decay.

Solar activity forecast: solar activity is expected to be very low.

STD: A full-disk Yohkoh x-ray image has been appended to this report showing the location and extent of the recurrent coronal hole expected to begin influencing the earth over the next 72 hours.

The geomagnetic field has been at quiet to unsettled levels for the past 24 hours.

Geophysical activity forecast: the geomagnetic field is expected to be unsettled to active on day one of the forecast period with day's two and three experiencing mostly active to minor storm conditions. A favorably positioned recurrent coronal hole is expected to produce this period's geomagnetic activity. Storm conditions are expected to persist well beyond the forecast period.

Event probabilities 29 apr-01 may

Class M	01/01/01
Class X	01/01/01
Proton	01/01/01
PCAF	Green

Geomagnetic activity probabilities 29 apr-01 may

A. Middle Latitudes	
Active	25/30/30
Minor Storm	25/35/40
Major-Severe Storm	05/15/15

B. High Latitudes	
Active	25/30/30
Minor Storm	30/40/45
Major-Severe Storm	10/20/25

HF propagation conditions were normal over all regions. Similar near-normal conditions are expected on 29 April, although high and polar latitudes, particularly transpolar and transauroral circuits, may begin to experience increased signal degradation as the leading edge of a proven geoeffective coronal hole related disturbance begins to impinge on the Earth. Conditions are expected to rapidly deteriorate to levels where frequent useless periods are expected for transpolar and transauroral circuits on 30 April and 01 May. Middle latitudes during this time are also expected to become moderately to periodically strongly degraded. Low latitudes will be less affected, but will not escape the effects of the activity altogether. Generally fair propagation is expected over these paths. No improvements are expected for at least the next week following the arrival of this disturbance.

COPIES OF JOINT USAF/NOAA SESC SOLAR GEOPHYSICAL REPORTS

REGIONS WITH SUNSPOTS. LOCATIONS VALID AT 28/2400Z APRIL

NMBR	LOCATION	LO	AREA	Z	LL	NN	MAG	TYPE
7704	N14W42	054	0010	BX0	02	002	BETA	
7705	N04W82	094	0050	HSX	01	001	ALPHA	
7707	N00W66	078	0000	AXX	02	002	ALPHA	
7709	N02W49	061					PLAGE	

REGIONS DUE TO RETURN 29 APRIL TO 01 MAY

NMBR LAT LO

NONE

LISTING OF SOLAR ENERGETIC EVENTS FOR 28 APRIL, 1994

A. ENERGETIC EVENTS:

BEGIN	MAX	END	RGN	LOC	XRAY	OP	245MHZ	10CM	SWEEP
0138	0144	0149			B3.9				II

POSSIBLE CORONAL MASS EJECTION EVENTS FOR 28 APRIL, 1994

BEGIN	MAX	END	LOCATION	TYPE	SIZE	DUR	II	IV
28/ 0146		0154		RSP	B3.9	11	1	

INFERRED CORONAL HOLES. LOCATIONS VALID AT 28/2400Z

 ISOLATED HOLES AND POLAR EXTENSIONS
 EAST SOUTH WEST NORTH CAR TYPE POL AREA OBSN
 NO DATA AVAILABLE FOR ANALYSIS

SUMMARY OF FLARE EVENTS FOR THE PREVIOUS UTC DAY

Date	Begin	Max	End	Xray	Op	Region	Locn	2695 MHz	8800 MHz	15.4 GHz
27 Apr:	0821	0929	1054	B1.5						
	1614	1616	1618		SF	7705	N06W63			

REGION FLARE STATISTICS FOR THE PREVIOUS UTC DAY

	C	M	X	S	1	2	3	4	Total	(%)
Region 7705:	0	0	0	1	0	0	0	0	001	(50.0)
Uncorrelated:	0	0	0	0	0	0	0	0	001	(50.0)

Total Events: 002 optical and x-ray.

EVENTS WITH SWEEPS AND/OR OPTICAL PHENOMENA FOR THE LAST UTC DAY

Date	Begin	Max	End	Xray	Op	Region	Locn	Sweeps/Optical Observations
NO EVENTS OBSERVED.								

NOTES:

All times are in Universal Time (UT). Characters preceding begin, max, and end times are defined as: B = Before, U = Uncertain, A = After. All times associated with x-ray flares (ex. flares which produce associated x-ray bursts) refer to the begin, max, and end times of the x-rays. Flares which are not associated with x-ray signatures use the optical observations to determine the begin, max, and end times.

Acronyms used to identify sweeps and optical phenomena include:

SPECIAL INSERT: CURRENT X-RAY EMISSIONS FROM THE JAPANESE YOHKOH SPACECRAFT

North

[illegible]

.....

South

KEY: East and west limbs are to the left and right respectively. Emission strength, from minimum to maximum are coded in the following way:

[space] . , : ; - + | ! 1 2 3 4 * # @

Units used are arbitrary, for illustrative purposes. Get "showasc.zip" from "pub/solar/Software" at the anonymous FTP site: ftp.uleth.ca (IP # 142.66.3.29) to view these images on VGA screens. Remove all but the image data before typing "showasc filename".

** End of Daily Report **

Date: 2 May 94 13:50:59 GMT
From: news-mail-gateway@ucsd.edu
Subject: inclusion
To: info-hams@ucsd.edu

subscribe please ham listserv Dave Scharra, KX8C, thanks.

Date: 2 May 1994 06:38:10 -0500
From: ihnp4.ucsd.edu!swrinde!cs.utexas.edu!not-for-mail@network.ucsd.edu
Subject: Straight Key Events ? [Q]
To: info-hams@ucsd.edu

Hi folks,
Is there still an SKN (Straight Key Night) where CW fans meet and use ordinary hand keys?
If not, are there OM that can remember such Straight Key Meetings?
Does or did something similar exist for semi-automatic keyers (mechanical bugs)?
In Europe there is a Straight Key Day every New Year's Day and every Midsummer Day (organized by a Scandinavian CW club), there is also a "bug" party organized by a German club.

I'd be grateful about any info concerning such events in the US or other parts of the world (history, dates, participation)

73 de IK2RMZ

Internet: martin%dacws2@dac.ise.jrc.it or martin.zurn@cen.jrc.it

End of Info-Hams Digest V94 #479
